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(Department of Academic Affairs)
Universiti Utara Malaysia

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Nama Penyelia Utama
(Name of Main Supervisor): **CIK AZIDA ZAINOL**

Tandatangan
(Signature) : _____

Tarikh
(Date) : _____

REQUIREMENT MODEL FOR INSTRUCTOR MANAGEMENT SYSTEM

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By
Lee Ai Leng

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**Dean of Faculty of Information Technology
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman**

ABSTRACT

The purpose of this project is to create a requirement model for Instructor Management System (IMS) based in Universiti Utara Malaysia (UUM), Kedah Darul Aman. Requirement model provide a more structured and integrated guide for the development of systems. Its serves as a good starting point or reference for system developers to understand the user's requirement which save cost, time and resources, thus, helps to decrease effort in the system development process and increased quality of the developed system. The methodology for requirement model of the IMS is derived from requirements analysis phase which comprises three main phases that are define requirements, analyze requirements and validate requirement model. System modelling and prototyping approach were used for requirement validation, while HOORA Analysis Tool (HAT) was used to validate the requirement model. Unified Modeling Language (UML) notation was adopted for the development of the requirement model. The requirement model consists of use case diagram, use case specification, class diagram, sequence diagram, collaboration diagram, activity diagram and supporting textual information. This requirement model provides a guideline in developing IMS by specifies a solution that is right for the user's needs. This project concludes by discussing problems and limitations that were encountered in completing this project, and offers a few recommendations for future development in this subject.

ABSTRAK

Projek ini bertujuan untuk membina satu model keperluan untuk sistem pengurusan pengajar yang berasaskan Universiti Utara Malaysia (UUM), Kedah Darul Aman. Model keperluan ini membekalkan satu panduan yang lebih berstruktur dan berpadu untuk pembangunan sistem. Ia menyediakan satu titik permulaan yang baik atau panduan kepada pihak pembangun sistem untuk memahami keperluan pengguna yang mana menjimatkan kos, masa dan sumber, demikian mengurangkan usaha yang diperlukan dalam proses pembangunan sistem dan meningkatkan kualiti sistem yang dibangunkan itu. Metodologi bagi model keperluan sistem pengurusan pengajar ini mengandungi tiga fasa utama iaitu mentakrifkan keperluan, menganalisis keperluan dan mengesahkan model keperluan yang mana diperolehi daripada fasa analisis keperluan. Pendekatan sistem model dan prototaip digunakan untuk mengesahkan keperluan, manakala *HOORA Analysis Tool (HAT)* digunakan untuk mengesahkan model keperluan. *Unified Modeling Language (UML)* notasi telah digunakan untuk pembangunan model keperluan ini. Model keperluan ini mengandungi *use case diagram*, *use case specification*, *class diagram*, *sequence diagram*, *collaboration diagram*, *activity diagram* dan teks informasi sokongan. Model keperluan ini menyediakan satu panduan dalam membangunkan sistem pengurusan pengajar dengan menentukan satu penyelesaian yang sesuai dengan keperluan pengguna. Projek ini menyimpul dengan membincang masalah dan limitasi yang dihadapi dalam menyiapkan projek, serta menawarkan beberapa rekomen untuk pembangunan pada masa depan dalam subjek ini.

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LIST OF ABBREVIATIONS

ACT	Activity
CIMOSA	Open System Architecture for Computer Integrated Manufacturing
COL	Collaboration
DDA	Deputy Dean of Academic
EC-DTF	Electronic Commerce Domain Task Force
FIT	Faculty of Information Technology
HAT	HOORA Analysis Tool
HDRM	Healthcare Domain Reference Data Model
HTTP	Hypertext Transfer Protocol
IMS	Instructor Management System
M-DRAP	Multi-agent Dynamic Resources Allocation Planning
ODP	Open Distributed Processing
OMG	Object Management Group
PHP	PHP: Hypertext Preprocessor
PPDM	Public Petroleum Data Model
RCS	Real-time Control System
REQ	Requirement
RM-ODP	Reference Model for Open Distributed Processing
SEQ	Sequence
SIS	Semantic Indexing System
SQL	Structured Query Language
UML	Unified Modeling Language
UUM	Universiti Utara Malaysia
WfMC	Workflow Management Coalition
WfMS	Workflow Management System

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CHAPTER ONE

INTRODUCTION

Instructor is a person whose job is to teach which provides education to a student in a particular area of skill primarily by direction command. In the education field, lecturer, tutor, teacher and a person who teach are considered as an instructor. Each institution has their own style in managing the instructors depend on their organization objectives and policies. According to Loucopoulos (1995), the effectiveness of the institution often depends upon the correct and efficient functioning of the information systems. Understanding an organization setting is crucial to developing a more compete understanding of requirement for information systems. It has long been established that the effectiveness and flexibility of a system are inextricably related to the correct understanding of the needs of the system's customers or users. Guidelines in requirement help in building the system, therefore this project aim to create a requirement model for Instructor Management System (IMS) as a reference in building the system.

1.1 Instructor Management in Universiti Utara Malaysia

In Universiti Utara Malaysia (UUM), the instructor management is referred to the activities of selecting instructor and managing information of instructor, tutorial and lab session. This study will be based on the instructor management in UUM faculties. UUM was established in 1984, at Darul Aman campus, Jitra, Kedah. It relocated to the Sintok Campus in 1990. Currently, UUM have thirteen (13) faculties which are Faculty of Cognitive Science and

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